



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,583	01/05/2004	David H. Bretz	(49370) 59058 DIV	3110
7590 01/11/2008 Intellectual Property Practice Group EDWARDS & ANGELL, LLP P.O. Box 9169 Moston, MA 02209			EXAMINER HOGAN, JAMES SEAN	
			ART UNIT 3752	PAPER NUMBER
			MAIL DATE 01/11/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/751,583

Applicant(s)

BRETZ, DAVID H.

Examiner

James S. Hogan

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 21-34 is/are pending in the application.
- 4a) Of the above claim(s) 23-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 21, 22, 31, 32 is/are rejected.
- 7) ☒ Claim(s) 32, 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4123/04 + 419/07
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 21-22 and 31-34, drawn to and atomization nozzle, classified in class 239, subclass 466.
- II. Claims 23-26, drawn to an air blast nozzle sub assembly, classified in class 239, subclass 463.
- III. Claims 27-30, drawn to an air blast nozzle assembly, classified in class 239, subclass 463.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are directed to related air-blast nozzle arts. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed have different modes for the swirling of air within the nozzle, invention "I" features an air swirler disposed on the exterior of the nozzle body, inside the chamber created by the air cap. Invention II features its air swirler inside the nozzle body, upstream of the outlet. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Inventions II and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because a pressure atomizer can take the form of many different combinations of components. The subcombination has separate utility such as an aerosol nozzle.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Inventions I and III are directed to related air-blast nozzle arts. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant

case, the inventions as claimed have different modes for the swirling of air within the nozzle, invention "I" features an air swirler disposed on the exterior of the nozzle body, inside the chamber created by the air cap. Invention II features its air swirler inside the nozzle body, upstream of the outlet. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Scott Wofsy, Reg. No 35413 on January 4, 2008 a provisional election was made with traverse to prosecute the invention of Group I, claims 21-22 and 31-34. Affirmation of this election must be made by applicant in replying to this Office action. Claims 23-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,547,163 to Mansour et al.

As per claim 21, Mansour et al teaches an blast atomization nozzle for a gas turbine having an outer air cap (43) having an interior chamber, an air swirler disposed within the interior chamber (152, 156) of the air cap and having an axial bore extending through, the air cap and the air swirler defining an outer airblast circuit between the two, a prefilmer (131) disposed within the axial bore of the air swirler and having an axial bore extending there-through, a fuel swirler (at 96) disposed within the axial bore of the prefilmer and having an axial bore extending there-through, the prefilmer and the fuel swirler defining a fuel circuit between each other and a heat shield (104). Mansour et al does not teach the heat shield being disposed within the axial bore of the fuel swirler, however, as Mansour et al teaches other form of heat shields exhibited throughout the device (notably at (51)) it would have been obvious to one having ordinary skill in the art at the time the invention was made to have added or modified or included a heat shield within the axial bore of the fuel swirler, since it has been held that rearranging parts on an invention involves only routine skill in the art. See *In re Japiske*, 86 USPQ 70.

Claims 22, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,547,163 to Mansour et al in view of U.S. Patent No. 4,168,803 to Simmons et al.

The rejection of claim 21 above serves as the basis for the following. As per claim 22, and the later part of claim 31, Mansour et al does not teach an external source

Art Unit: 3752

of air for its air assist circuit. Simmons et al teaches an additional source of air for assisting a turbine during start-up. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the external air source of Simmons et al in the invention of Mansour et al in order to impart assistance in a turbine powered fuel system. As per claim 33, Mansour et al teaches circumferentially disposed vanes (158, 162) for imparting a swirling motion within the outer airblast circuit.

#### ***Allowable Subject Matter***

Claims 32 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

U.S. Patent No. 3,013,732 to Webster et al.

U.S. Patent No. 4,584,834 to Koshoffer et al

U.S. Patent No. 5,373,693 to Zarzailis et al

U.S. Patent No. 6,272,840 to Crocker et al

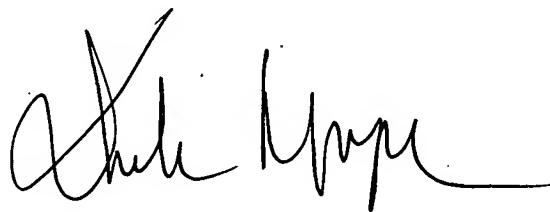
U.S. Patent No. 5,737,921 to Jones et al

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Hogan whose telephone number is (571) 272-4902. The examiner can normally be reached on Mon-Fri, 7:00a-4:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSH  
1/7/2008

A handwritten signature in black ink, appearing to read 'Dinh Q. Nguyen', with a stylized, flowing script.

**DINH Q. NGUYEN**  
**PRIMARY EXAMINER**